

## Documentation for gnuPipe.h and gnuPipe.c

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See the document “LibDoc” for general information about this and other libraries.

```
FILE *gnuWindow();
void gnuKill(FILE *gnu);
void gnuCmd(FILE *gnu, char *s);
void gnuSetScales(FILE *gnu, float xa, float xb, float ya, float yb);
void gnuPrompt(FILE *gnu);
void gnuData(FILE *gnu, float *x, float *y, int m, int col);
void gnuData2(FILE *gnu, float *x, float *y, int *ct, int col);
```

Requires: <stdio.h>

Example program: test.c

Written 10/29/01 on Linux; no version on Macintosh. Some testing.

These routines allow minimal plotting of data by piping to the free gnuplot program. Apparently a version of gnuplot exists for the Macintosh, which I'll try to download sometime.

`gnuWindow` opens a pipe, returning a pointer to the file. This pointer needs to be sent back for all the other library routines.

`gnuKill` closes the pipe.

`gnuCmd` sends a command string to gnuplot without any prior filtering or processing. Since it's not possible to get messages back from gnuplot, there is no way for a calling program to know if an error occurred.

`gnuSetScales` sets scales of the plot, where the  $x$  range is from  $x_a$  to  $x_b$  and the  $y$  range is from  $y_a$  to  $y_b$ . If  $x_a=x_b$  then autoscaling is used for  $x$ , and similarly for  $y$ .

`gnuPrompt` displays a prompt to the standard output to allow the program user to enter commands directly to gnuplot. It terminates when the user enters a blank line.

`gnuData` plots sets of  $x,y$  data to gnuplot, where there is one column of  $x$  values, with  $m$  items and  $col$  columns of  $y$  data, with  $m$  values each.

`gnuData2` is similar except that there are  $col$  columns of  $x$  data to plot against the respective columns of  $y$  data. Each column has  $ct[i]$  elements.